Expanding Automated Astronomy Programs

Russ Genet

California Polytechnic State University

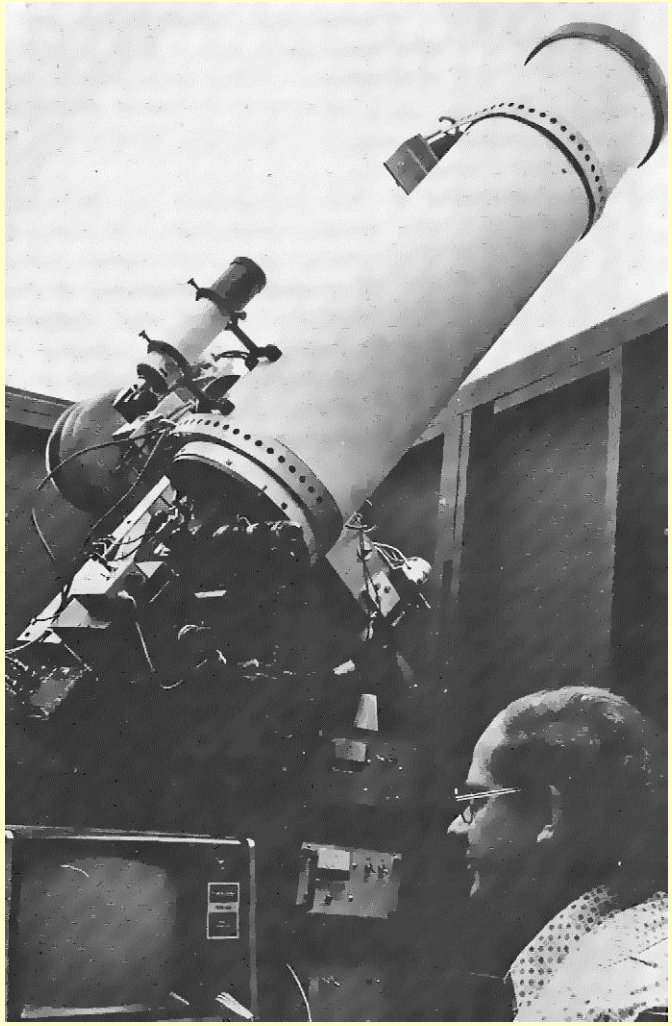
Presentation Outline

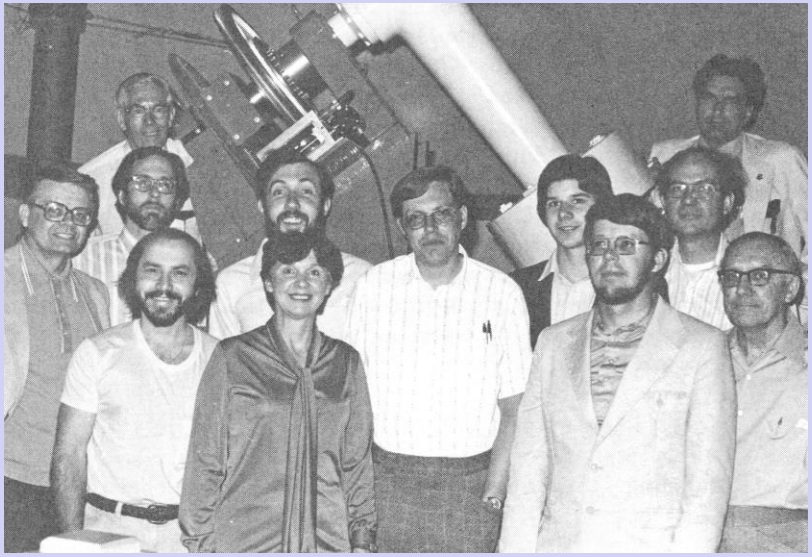
- **Prior expansion example: variable star photometry**
- **Speckle expansion**
- **Facilitating speckle expansion**

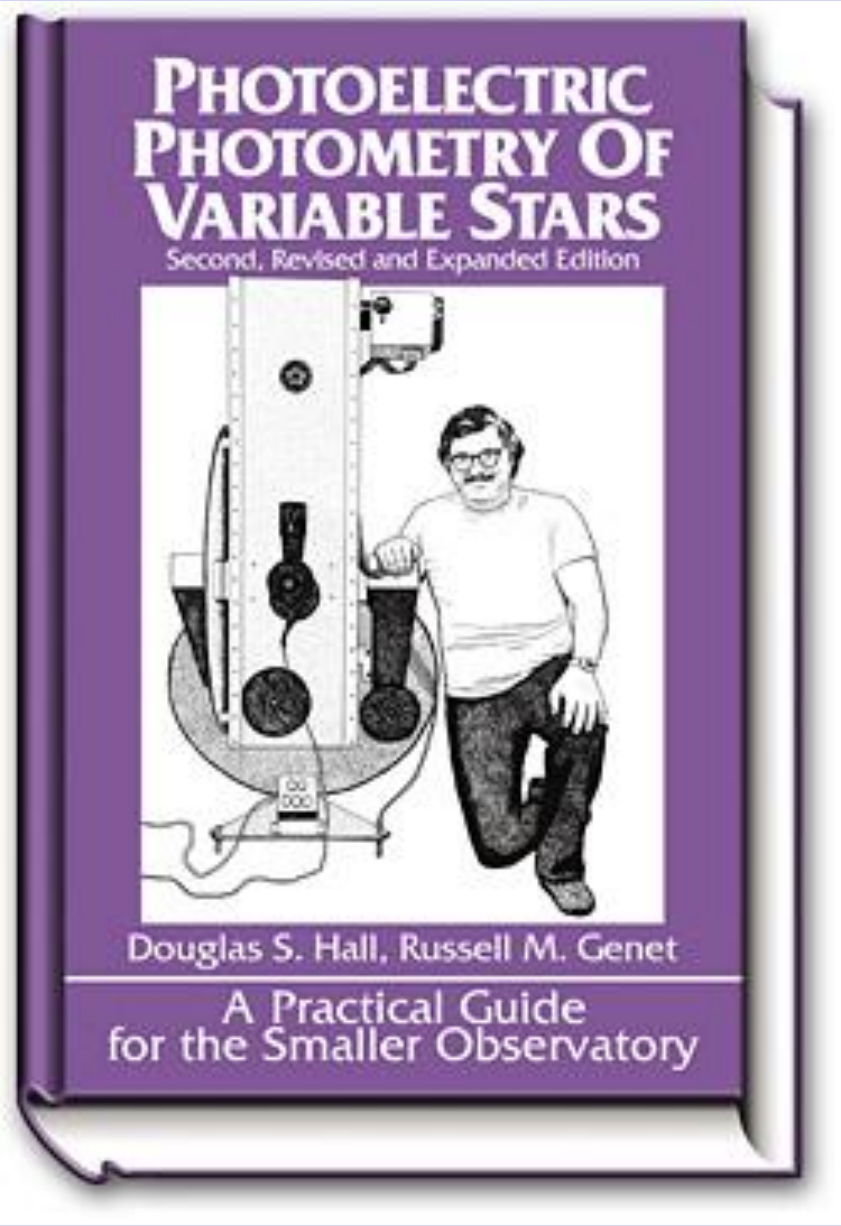
Prior expansion example

Variable star photometry

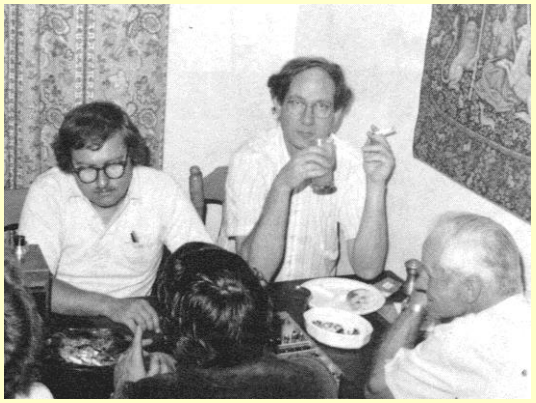
The Fairborn Observatory

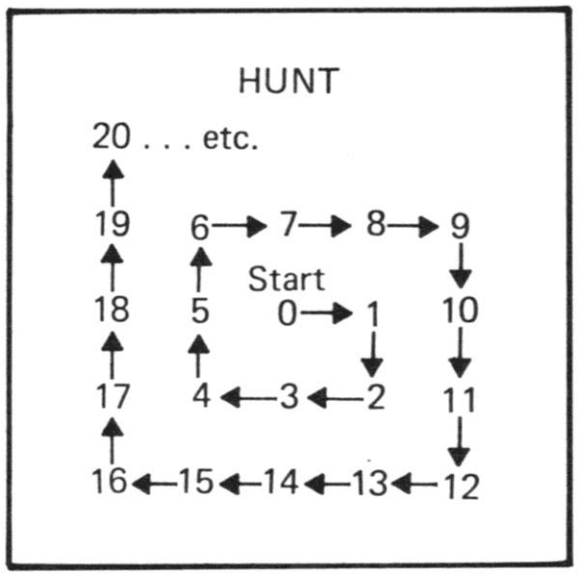


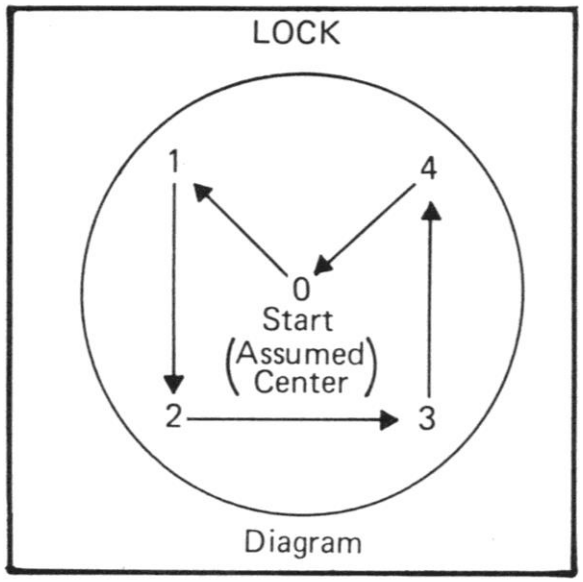



PHOTOELECTRIC PHOTOMETRY OF VARIABLE STARS
Second, Revised and Expanded Edition
Douglas S. Hall, Russell M. Genet
A Practical Guide for the Smaller Observatory

Early Automation



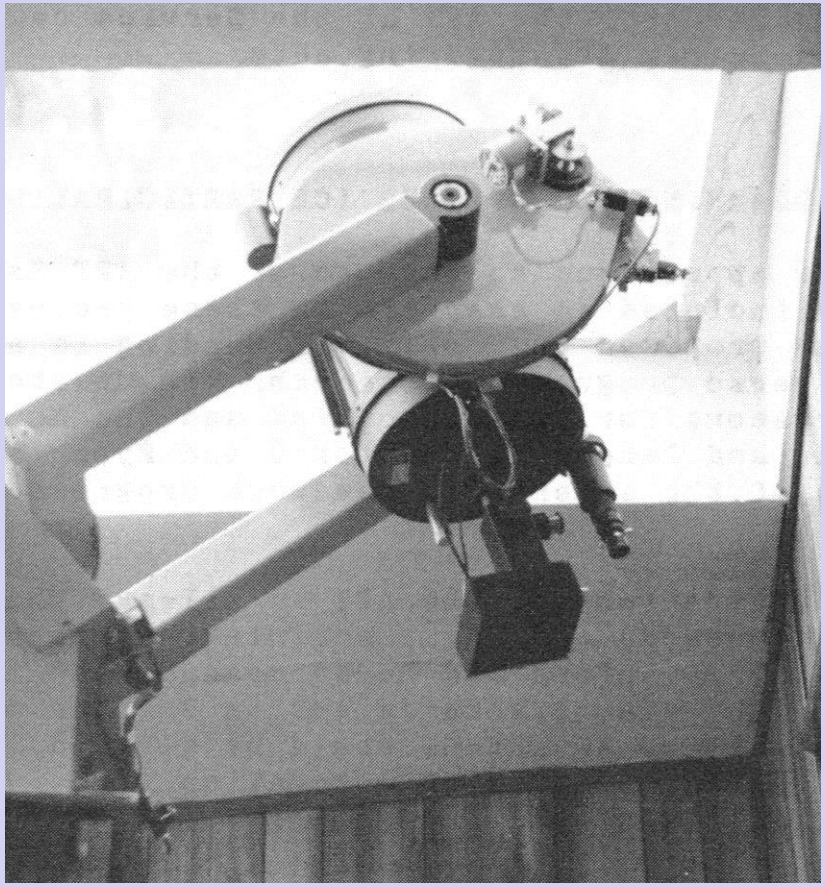




MEASUREMENT SEQUENCE

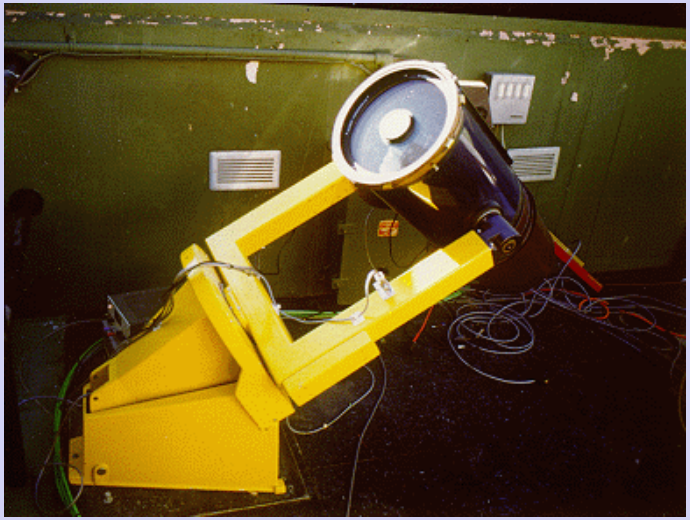
	U	B	V
0. Check Star			
1. Sky			
2. Comp Star			
3. Variable Star			
4. Comp Star			
5. Variable Star			
6. Comp Star			
7. Variable Star			
8. Comp Star			
9. Sky			
10. Check Star			

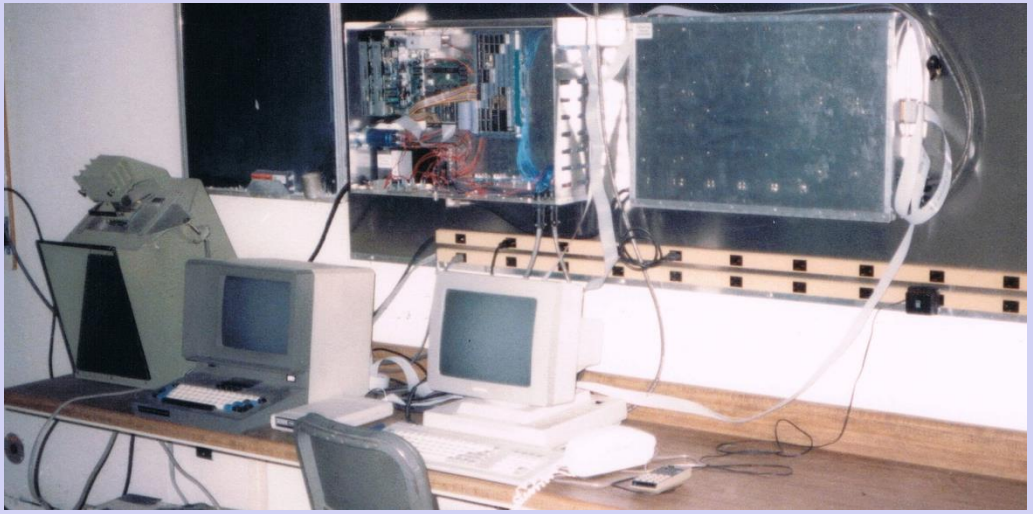
13-4 The APT Measurement Sequence

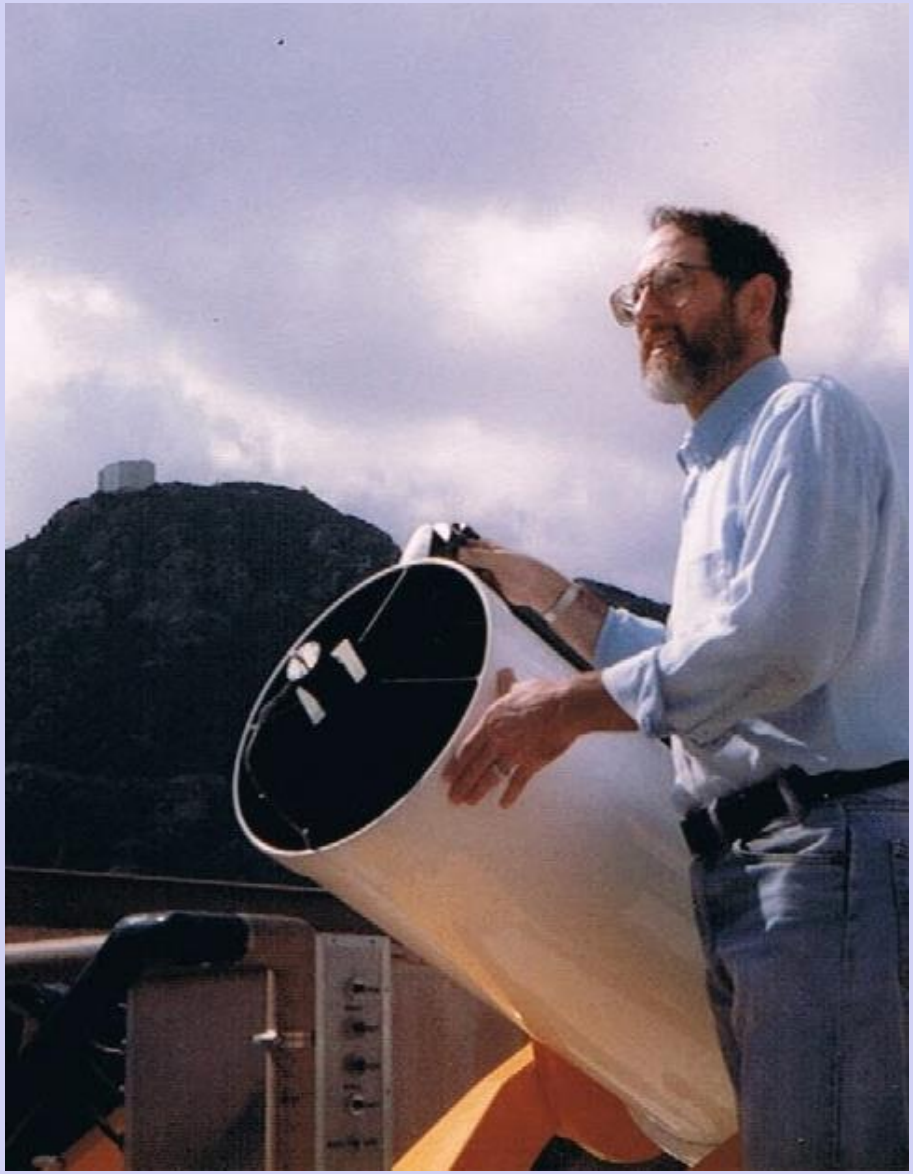


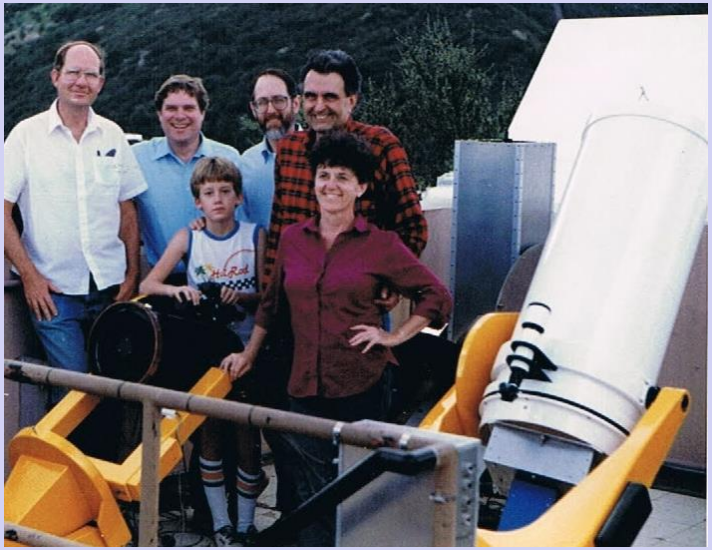
AUTOMATIC
PHOTOELECTRIC
TELESCOPE
SERVICE
Observatory
Observatory.

I.A.P.P.P.
I.A.P.P.P.
INTERNATIONAL
PROFESSIONAL
PHOTOMETRY



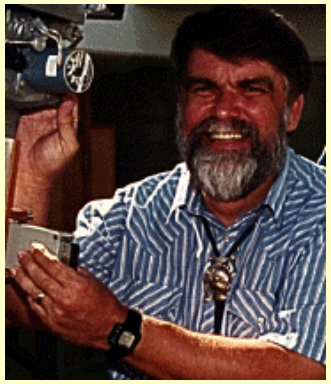


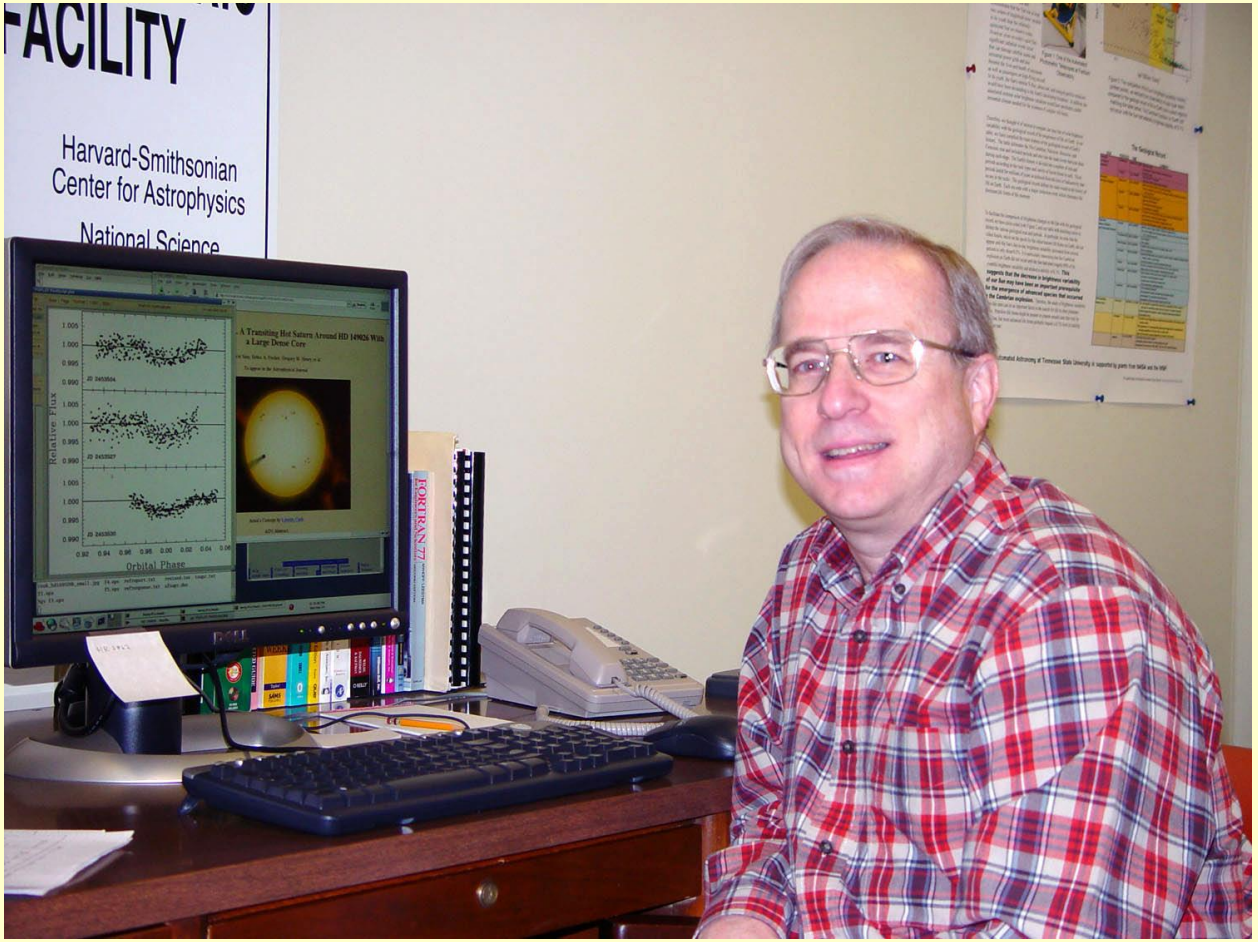




Observatory Automation

Principal Astronomers





Remote Access

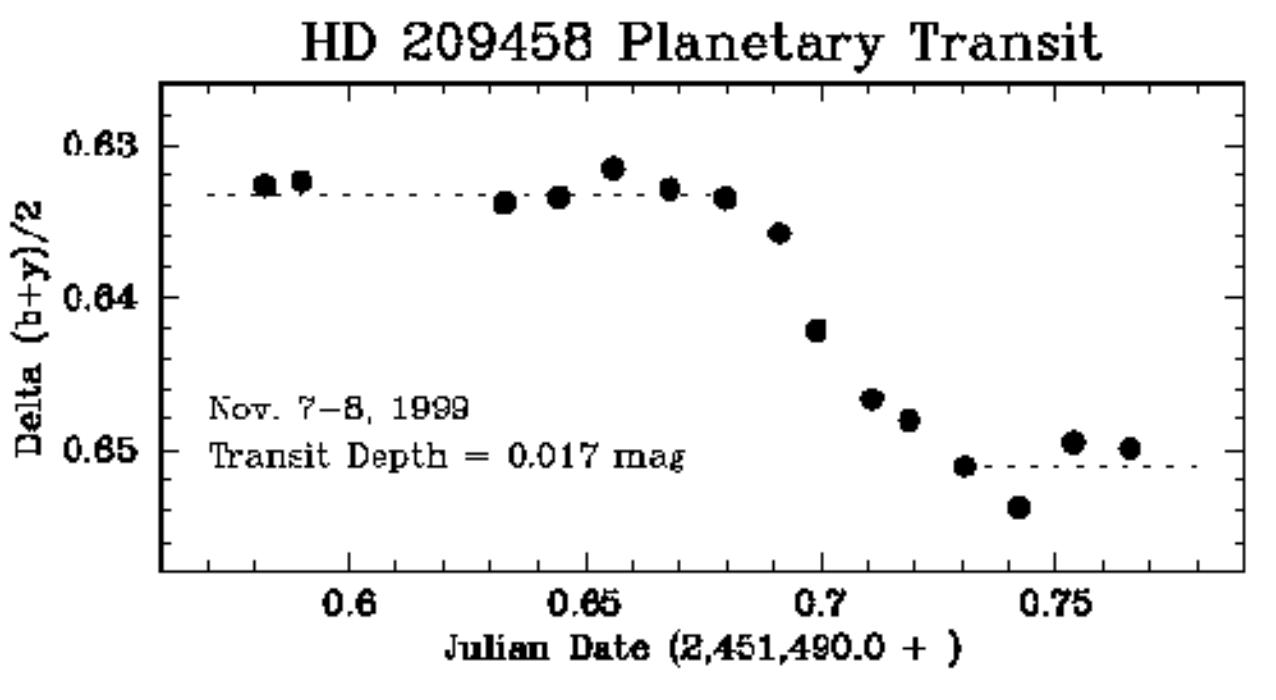
Fairborn Observatory Today

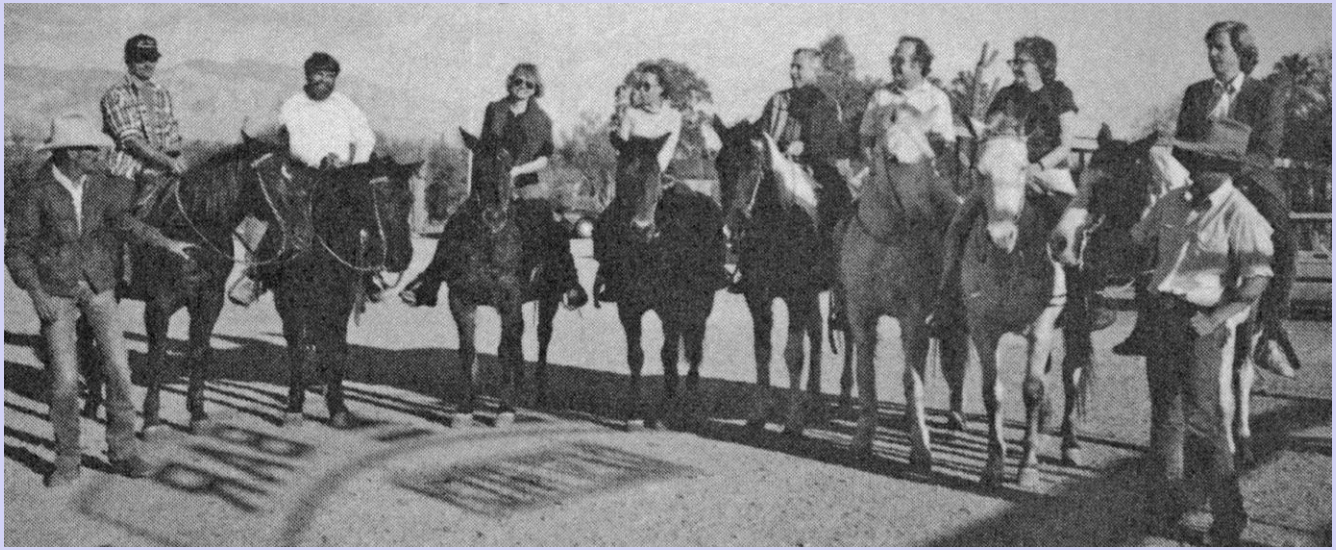
Robotic Telescopes in the 1990s
ASP Conference Series, Vol. 34, 1992
Alex V. Filippenko (ed.)

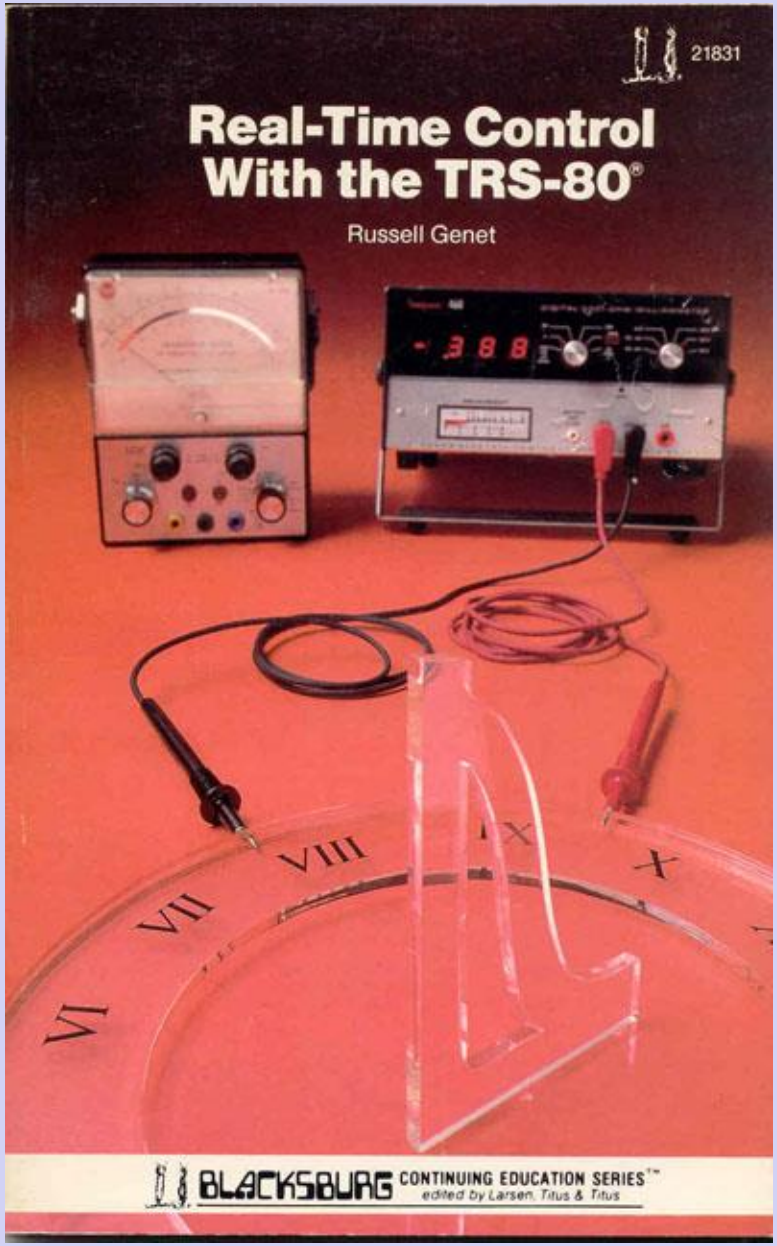
THE USE OF ROBOTIC TELESCOPES FOR DETECTING PLANETARY SYSTEMS

WILLIAM J. BORUCKI
NASA Ames Research Center, Mail Stop 245-3, Moffett Field, CA 94035

RUSSELL M. GENET
Fairborn Observatory, 3435 E. Edgewood Ave., Mesa, AZ 85204



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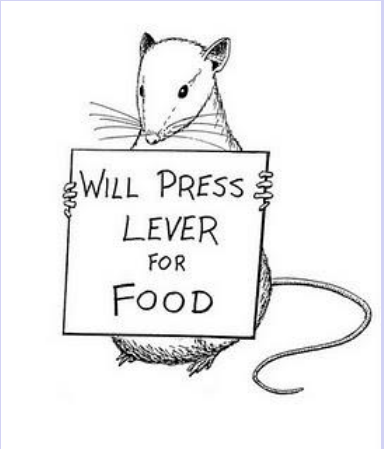
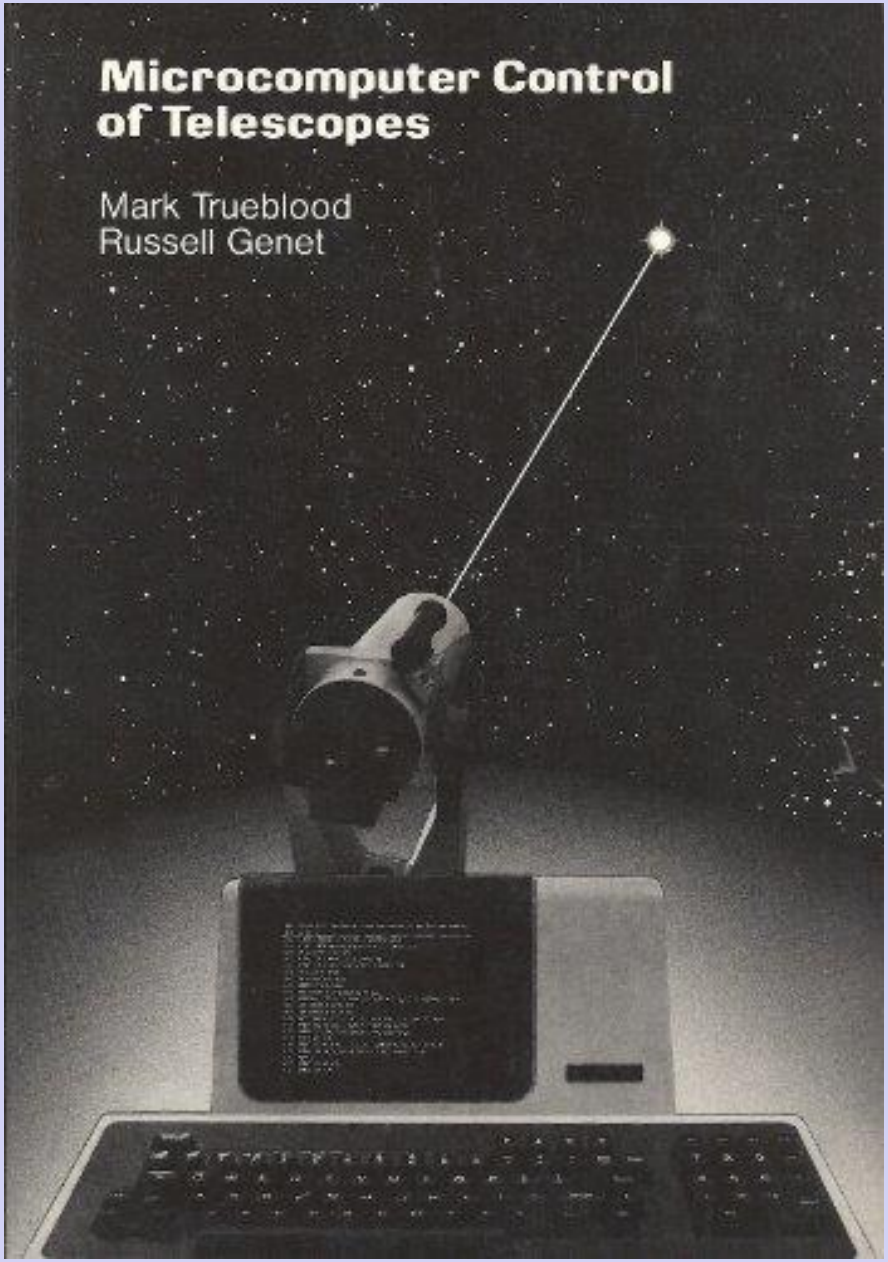
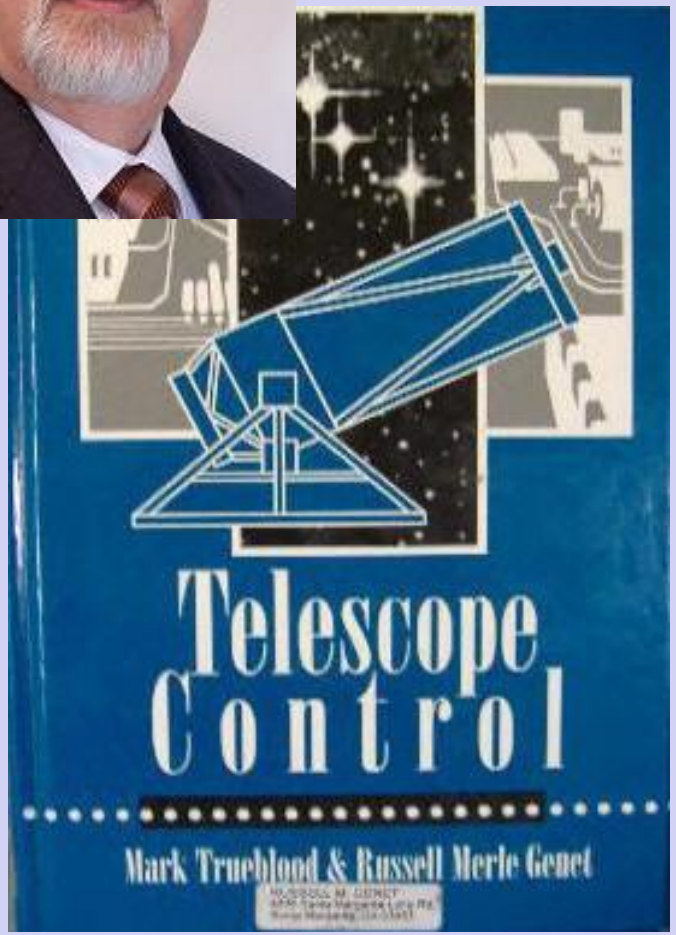
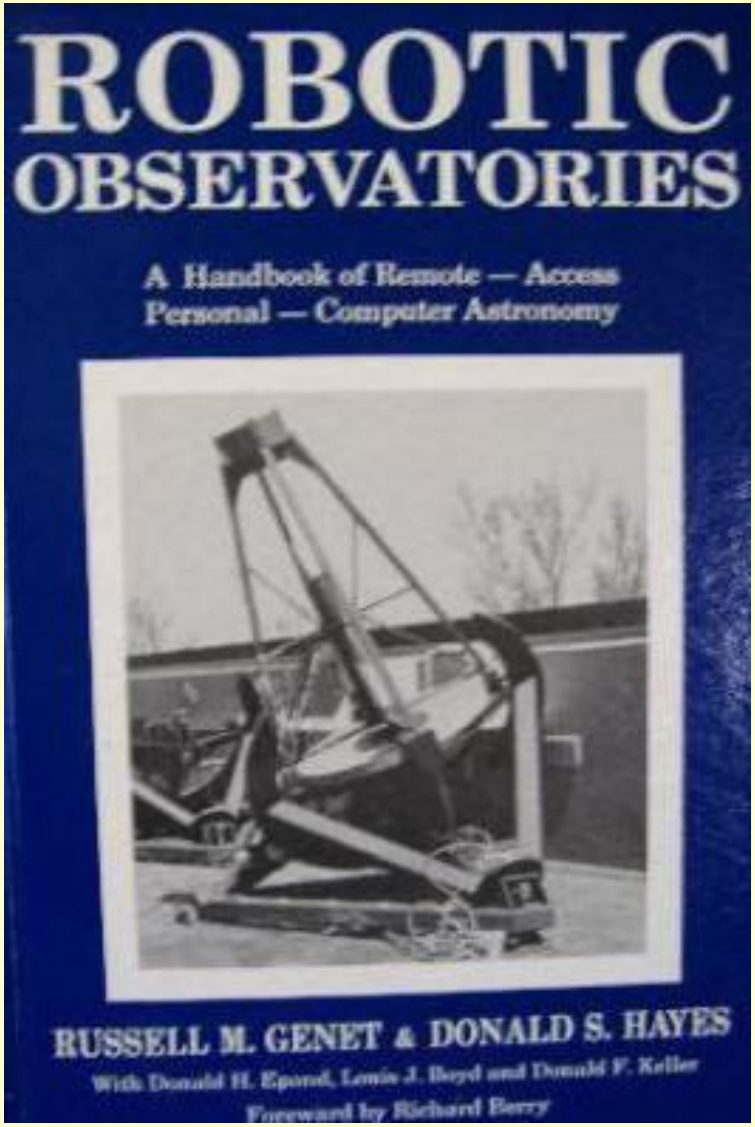

WILL PRESS LEVER FOR FOOD


Microcomputer Control
of Telescopes
Mark Trueblood
Russell Genet


Telescope
Control
Mark Trueblood & Russell Merle Genet


ROBOTIC
OBSERVATORIES
A Handbook of Remote — Access
Personal — Computer Astronomy
RUSSELL M. GENET & DONALD S. HAYES
With Donald H. Eguud, Lewis J. Boyd and Donald F. Keller
Foreword by Richard Berry

Speckle Expansion

- **Why expand?**
  - **Current lists**
  - **Gaia, LSST, millions of multiples, large DM**
- **Expansion areas**
  - **Amateurs/non-EMCCD cameras**
  - **Students**
  - **EMCCD cameras to larger telescopes**
  - **Automation**

Facilitating Expansion

- **Workshops and conferences**
  - **USNO June 2014**
  - **Lowell Observatory October 2014**
  - **Maui February 2015**
  - **Honolulu IAU GA August 2015**
  - **Barcelona Spain September 2015 (?)**
- **Group runs**
- **Courses**
- **Publications**